

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~★~~ An automotive heat exchanging system comprising:
a heat exchanger mounted ~~in~~ at a front of an engine and an automatic transmission and to
be supplied with a coolant;
an electric fan ~~which is located in a~~ at the front of said automatic transmission and
~~ensures~~ operable to ensure airflow through said heat exchanger;
a shroud attached to and covering peripheral portions of said electric fan and said ~~heart~~
heat exchanger to form an air passage inside of said shroud for allowing airflow through said heat
exchanger to flow toward said automatic transmission;
a shutter ~~disposed in and attached at~~ arranged in said shroud and having a periphery
~~thereof attached~~ to said shroud, said shutter being operable to open and close said air passage;
an automatic transmission oil temperature sensor for sensing a temperature of oil in said
automatic transmission and ~~outputs~~ for outputting an automatic transmission oil temperature
signal;
a controller ~~which controls~~ for controlling opening and closing of said shutter based on
the automatic transmission oil temperature signal received from said automatic transmission oil
temperature sensor.
2. (Currently Amended) ~~★~~ The automotive heat exchanging system ~~as set forth in of~~
claim 1, further comprising ~~in which further comprises~~ an oil warmer ~~which is arranged to be~~
supplied with the coolant circulating through ~~an~~ said engine and said heat exchanger, said oil
warmer being ~~and attached to the said~~ automatic transmission to warm the oil in said automatic
transmission.
3. (Currently Amended) ~~★~~ The automotive heat exchanging system ~~as set forth in of~~
claim 1, wherein in which said electric fan is located ~~behind~~ at a rear of said heat exchanger, and
said shutter ~~being~~ is located between said heat exchanger and said electric fan.

4. (Currently Amended) ~~A~~ The automotive heat exchanging system as set forth in of claim 1, wherein in which said electric fan is located ~~behind~~ at a rear of said heat exchanger, and said shutter ~~being is~~ located ~~behind~~ at a rear of said electric fan.

5. (Currently Amended) ~~A~~ The automotive heat exchanging system as set forth in of claim 1, wherein in which said electric fan is located ~~in~~ at a front of said heat exchanger, and said shutter ~~being is~~ located ~~behind~~ at a rear of said ~~shutter~~ electric fan.

6. (Currently Amended) ~~A~~ The automotive heat exchanging system as set forth in of claim 1, wherein which said controller ~~controls~~ is operable to fully open said shutter ~~to open fully~~ for allowing air to pass through said air passage when the automatic transmission oil temperature is more than a predetermined oil temperature.

7. (Currently Amended) ~~A~~ The automotive heat exchanging system as set forth in of claim 6, wherein in which said controller ~~controls~~ is operable to partially open said shutter ~~to open partially~~ when said the automatic transmission oil temperature is ~~at most a~~ no more than the predetermined oil temperature, and to fully open said shutter ~~to open fully~~ when the automatic transmission oil temperature is more than the predetermined oil temperature.

8. (Currently Amended) ~~A~~ The automotive heat exchanging system as set forth in of claim 6, wherein in which said heat exchanger includes a condenser for air conditioning, and ~~the~~ said controller ~~controlling~~ is operable to open said shutter ~~to open~~ regardless of the engine temperature and the automatic transmission oil temperature when an inlet pressure of said condenser is more than a predetermined pressure.

9. (Currently Amended) ~~A~~ The automotive heat exchanging system as set forth in of claim 6, further comprising in which further comprises an engine temperature sensor sensing an engine temperature of the coolant and outputting an engine temperature signal, said controller

controlling operable to fully open said shutter ~~to open fully~~ for allowing air to pass through said air passage when the automatic transmission oil temperature is more than a predetermined oil temperature and when the automatic transmission oil temperature is ~~at most a~~ no more than the predetermined oil temperature and said engine temperature is more than a predetermined engine temperature.

10. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in of~~ claim 9, wherein in which said controller ~~controls~~ is operable to partially open said shutter ~~to open partially~~ when said the automatic transmission oil temperature is ~~at most a~~ no more than the predetermined oil temperature, and to fully open said shutter ~~to open fully~~ when the automatic transmission oil temperature is more than the predetermined oil temperature.

11. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in of~~ claim 9, wherein in which said heat exchanger includes a condenser for air conditioning, and ~~the~~ said controller controlling is operable to open said shutter ~~to open~~ regardless of the engine temperature and the automatic transmission oil temperature when an inlet pressure of said condenser is more than a predetermined pressure.

12. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in of~~ claim 2, wherein in which said heat exchanger includes a radiator, and said controller ~~controlling~~ is operable to fully open said shutter ~~to open fully~~ when said the automatic transmission oil temperature is more than the predetermined oil temperature, and ~~controlling to direct a flow of~~ the coolant flowing to said radiator ~~to flow~~ to said oil warmer when the engine temperature of the coolant flowing to said radiator is more than ~~said the~~ predetermined engine temperature.

13. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in of~~ claim 12, wherein in which said controller ~~controls~~ is operable to partially open said shutter ~~to open partially~~ when said the automatic transmission oil temperature is ~~at most a~~ no more than the

predetermined oil temperature, and to fully open said shutter ~~to open fully~~ when the automatic transmission oil temperature is more than the predetermined oil temperature.

14. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in~~ of claim 13, ~~wherein in which~~ said controller ~~controls~~ is operable to change an opening amount of said shutter ~~to change opening of said shutter~~ according to at least one predetermined low oil ~~temperatures~~ temperature lower than ~~said the~~ predetermined oil temperature.

15. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in~~ of claim 13, ~~wherein in which~~ said heat exchanger includes a condenser for air conditioning, and ~~the~~ said controller ~~controlling~~ is operable to open said shutter ~~to open~~ regardless of the engine temperature and the automatic transmission oil temperature when an inlet pressure of said condenser is more than a predetermined pressure.

16. (Currently Amended) ~~A~~ The automotive heat exchanging system ~~as set forth in~~ of claim 1, ~~wherein in which~~ said heat exchanger includes a condenser for air conditioning, and ~~the~~ said controller ~~controlling~~ is operable to open said shutter ~~to open~~ regardless of the engine temperature and the automatic transmission oil temperature when an inlet pressure of said condenser is more than a predetermined pressure.

17. (New) The automotive heat exchanging system of claim 1, wherein said heat exchanger comprises a condenser and a radiator at a rear of said condenser.

18. (New) The automotive heat exchanging system of claim 1, wherein said shroud has a front end, a rear end, sidewalls connecting said front end and said rear end, and an opening formed in said sidewalls to allow air to flow out of said air passage inside of said shroud.